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Sent: Thursday, December 12, 2013 10:50 AM
To: Weigel, Greg
Cc: Lynch, Kira; Fisher, Carla; Smith, Andy; 'Kelly Wright'; susanh@ida.net; Jeff Hamilton; brian.english@deq.idaho.gov; Al Lam; Mark Smith; Marc Bowman; Rochlin, Kevin; vannoyj@dhw.idaho.gov; Paden, Norka E - CO 6th; Weigel, Greg; Rob Hartman
Subject: as requested in call today
Attachments: Summary of RCRA Pond Gas Monitoring - November 2013 Update.pdf
Categories: 11-19 to 1-10 2014

Attached is an updated table, which brings the monitoring program frequencies up to date to reflect the current program. Please note that the program itself has not changed since our previous submission in January 25, 2013 as part of the "4Q12 Phosphine Assessment Study" Tech Memo, although the monitoring frequencies have been adjusted based on the accumulation of monitoring results. Section 3 of the proposed amended Post-Closure Plan (aPCP) that FMC submitted on December 14, 2012 stated that as additional data are collected the air monitoring frequency could be adjusted up or down. This is consistent with the EPA-approved Air Monitoring Plan (AMP) developed under the RCRA Ponds UAO. Also note that the aPCP and AMP are generally consistent regarding air monitoring, but differ in scope. For example, the AMP only address monitoring outside the ponds while the air monitoring under the proposed aPCP includes not only monitoring outside the ponds but also monitoring at the ponds themselves, e.g., in perimeter pipes and inside appurtenances.

The PH3 monitoring program specified under the draft aPCP was first proposed to EPA in the July 16, 2012 Framework for PH3 Monitoring (with the exception of surface scans).

Some further background on the evolution of the specific components of the attached schedule is provided here to facilitate your review. Note that the monitoring programs have not changed significantly, and FMC continues to perform monitoring pursuant to the EPA-approved Air Monitoring Plan (AMP) as directed by EPA's letter dated February 21, 2013. The changes to the monitoring program since January 2013 and the bases for these changes are noted below.

- FMC's letter dated April 18, 2013 notified EPA that gas extraction and treatment had commenced at Pond 16S and Pond 18A on April 18, 2013, pursuant to the EPA-approved Readily Implementable Interim Work Plans (IWP). As FMC stated in that letter, "with the agency's direction to commence gas extraction at Pond 16S and Pond 18A, the Phosphine Assessment Study, which was primarily designed to evaluate the rebound of phosphine concentrations at Ponds 16S and 18A and to develop triggers for gas extraction, is now moot as gas extraction has now recommenced." Thus, monitoring is no longer performed pursuant to the Phosphine Assessment Study (Work Plan).
- At Pond 15S, the annual perimeter scan is performed per the AMP and appurtenance monitoring also would be annual per the AMP. Gas extraction ceased at Pond 15S on April 23, 2013 and no perimeter pipe monitoring is required under the AMP (or any other RCRA Ponds UAO plan). However, FMC has performed quarterly appurtenances and perimeter pipe monitoring per Section 3 of the proposed amended Post-Closure Plan (aPCP) beginning in 3Q13.
- At Pond 16S, appurtenance and surface scan is quarterly per AMP because the perimeter pipe concentrations are < 2,000 ppm. Gas extraction at Pond 16S ceased on July 2, 2013, and the AMP and IWP do not require perimeter pipe monitoring after gas extraction has ceased. However, beginning in 4Q13 and consistent with the AMP and Section 3 of the proposed aPCP, FMC has performed quarterly monitoring at Pond 16S of pond appurtenances and perimeter piping.
- At Pond 18A, perimeter scan and appurtenance monitoring is performed monthly so long as monthly average perimeter pipe concentration is > 10,000 ppm; and when monthly average perimeter pipe concentration is < 10,000 ppm, appurtenance monitoring reverts to quarterly consistent with Section 3 of the proposed aPCP. In contrast, the monitoring frequency under the AMP for perimeter surface scans and appurtenance would have reset to quarterly starting in 1Q14 as there were no detects through November 2013 (12 consecutive months) after the only perimeter surface scan detect > 0.05 ppm in November 2012 and appurtenance leak detection detect (base T-03) in November 2012.

Summary of RCRA Pond Phosphine Monitoring Programs (Updated November 2013)

Pond	Air Monitoring Plan ¹		Soil Gas	Perimeter pipe	TMP
	Surface Scan	Appurtenance			
8S	Annual (3Q 14) ²	Annual (3Q 14) ²	None	None	None
9E	Annual (3Q 14) ²	Annual (3Q 14) ²	None	None	None
Phase IV	Annual (3Q 14) ²	Annual (3Q 14) ²	None	None	None
8E	Annual (3Q 14) ²	Annual (3Q 14) ²	None	None	None
17	Annual (3Q 14) ²	Annual (3Q 14) ²	None	None	None
18A	Monthly (Dec 13) ³	Monthly (Dec 13) ³	None	Monthly ⁴	None
16S	Quarterly (1Q 14) ⁵	Quarterly (1Q 14) ⁵	None	Quarterly (1Q 14) ⁵	None
15S	Annual (3Q 14) ⁶	Quarterly (4Q 13) ⁶	None	Quarterly (4Q13) ⁶	None

Notes:

Dates in parentheses indicate next scheduled round following completion of Nov / 4Q 2013 monitoring.

¹ Monitoring pursuant to the RCRA Pond UAO – SOW Task 1 – Air Monitoring Plan (AMP) – Part I and Part II, January 2011 until satisfaction and termination of the RCRA Pond UAO. Appurtenance and, if triggered, surface scan monitoring would then be performed pursuant to Section 3 of the amended RCRA Post-Closure Plan (aPCP).

² Quarter and year indicates next scheduled round of monitoring based on the annual frequency in the RCRA Pond UAO AMP. Following satisfaction / termination of the RCRA Pond UAO and EPA approval of the aPCP, appurtenance and, if triggered, surface scan monitoring would then be performed pursuant to Section 3 of the amended RCRA Post-Closure Plan.

³ Per Section 3 aPCP, perimeter scan and appurtenance monitoring is monthly as long as monthly average perimeter pipe > 10,000 ppm; when monthly average perimeter pipe < 10,000 ppm, appurtenance monitoring quarterly. Per the AMP, monitoring frequency for perimeter surface scans and appurtenance would have reset to quarterly starting in 1Q14 as there were no detects through November 2013 (12 consecutive months) after the perimeter surface scan detect > 0.05 ppm in November 2012 and appurtenance leak detection detect (base T-03) in November 2012.

⁴ Per Pond 18A Interim Work Plan (IWP; March 2013); monthly average based on GES unit source gas until east standpipe < 2,000 ppm, then monitor south standpipe monthly for two consecutive months. If two consecutive months < 2,000 ppm at both standpipes (monthly average and monitoring results), cease gas extraction.

⁵ Gas extraction ceased July 2, 2013. Per AMP, perimeter pipe < 2,000 so appurtenance and surface scan reverted to quarterly. Shaded cells indicate monitoring per Section 3 aPCP, appurtenance and perimeter pipe monitoring quarterly began 4Q13. No perimeter pipe monitoring under AMP or IWP upon cessation of gas extraction.

⁶ Annual perimeter scan per AMP (unless triggered per Section 3 aPCP) and appurtenances would be annual per AMP. Gas extraction ceased April 23, 2013. No perimeter pipe monitoring under AMP. Shaded cells indicate monitoring per Section 3 aPCP, appurtenances and perimeter pipe quarterly began 3Q13.